



On Your Way To Total Fitness

Total Fitness Series
Introduction

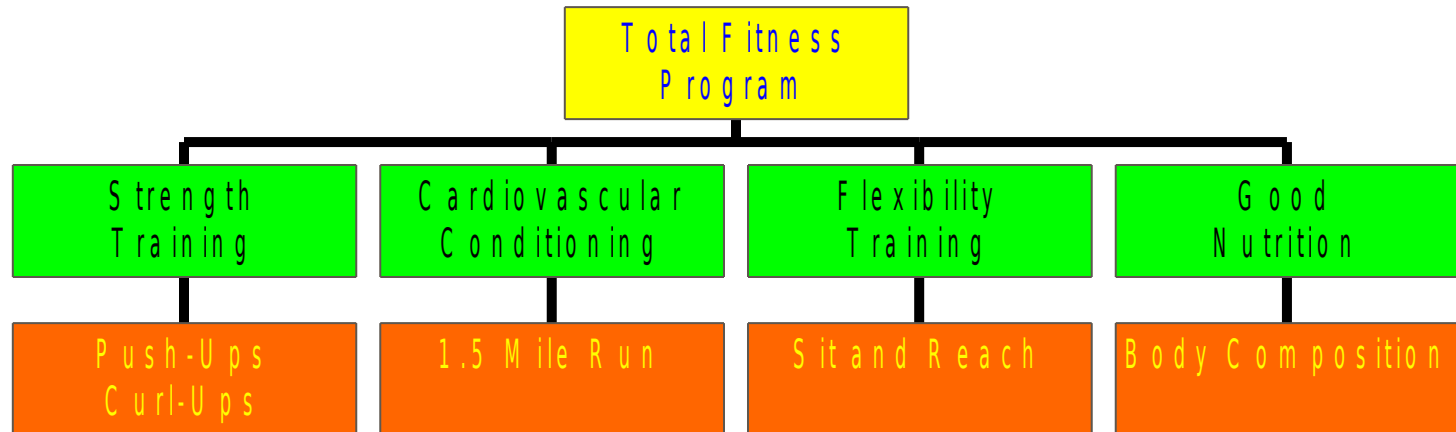


What is “Total Fitness?”



■ “Total Fitness” can be achieved by incorporating the major components of fitness into your daily routine. Alone, each component of fitness will aid in making you healthier, but by combining them, you will receive maximum benefits. As a member of the US Navy, fitness is a requirement of your job, and a “Total Fitness” program will give you the fitness level needed for a successful career.

Components of a “Total Fitness” Program



Why do you need to get fit?

- You only have one body.
- A fitness program, combining the components of “Total Fitness”, will enhance your quality of life, improve PFA scores and possibly allow you to live longer.



Maximize the Benefits Achieved by Combining All Components of TF

No Changes In Lifestyle =
No Benefits

Cardio Training + No Other Changes in Lifestyle
=
Some Benefit

Cardio Training + Nutritional Changes =
Moderate Benefits

Cardio Training + Strength Training + Nutritional
Changes =
HIGH BENEFITS

Cardio Training

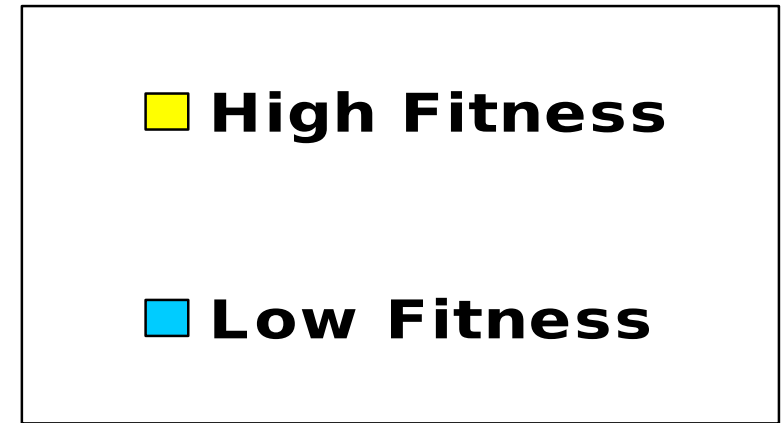
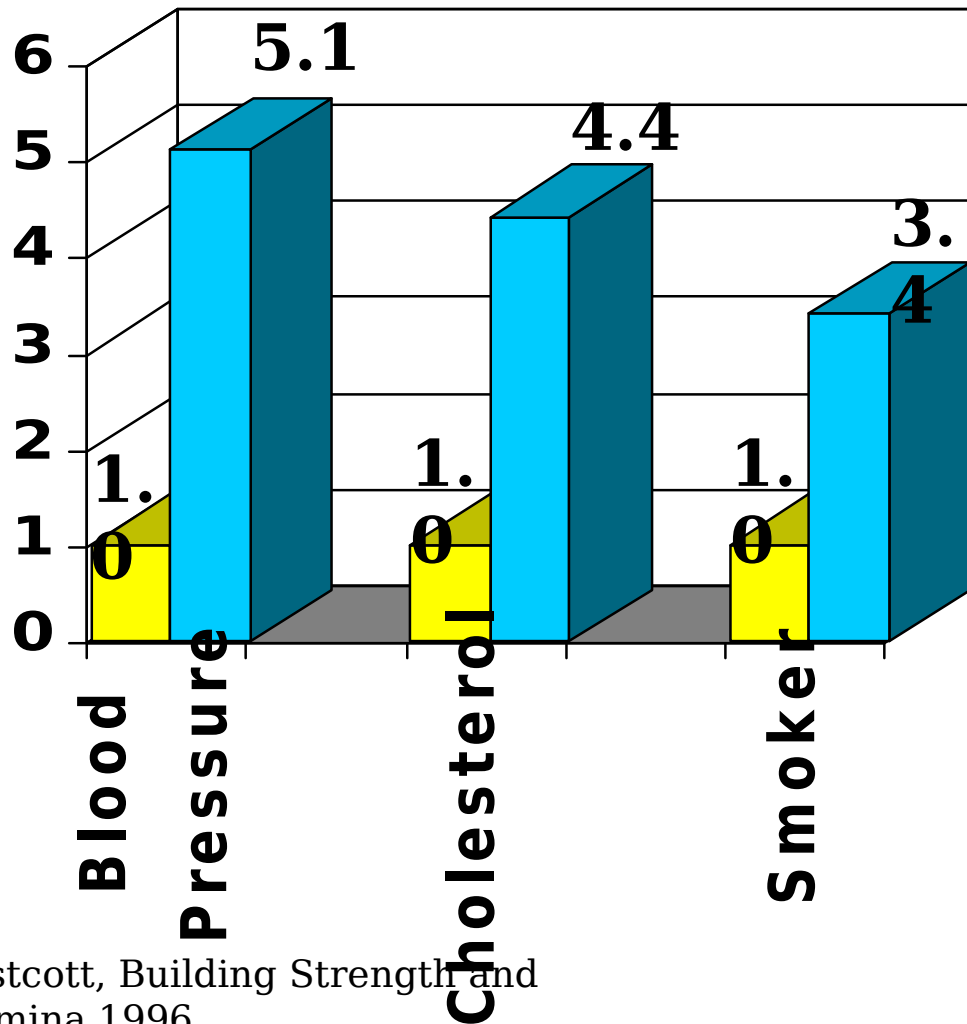
What are the benefits?

Decrease Cardiovascular Risk Factors

- Decreased risk of developing cardiovascular disease and/or having a heart attack

Note: By regularly overloading the heart it will become stronger. This allows the heart to pump more blood and deliver more oxygen to the body per heartbeat. The result is a lower resting heart rate and a higher level of fitness.

Relative Risk of Heart Attack Based on Fitness Level

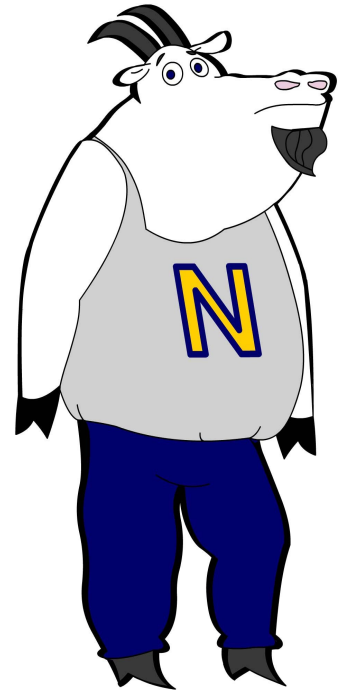


Note: Those individuals, with a higher fitness level, are at a lower risk for heart attack and cardiovascular disease than individuals with similar type risk

Cardio Training: Benefits Continued

Decreased Risk Of Developing Obesity

- Aerobic activity will allow your body to burn calories that could otherwise be stored as fat. This can aid in lowering your body fat to a desirable level.



Cardio Training: Benefits Continued

Improve Physical Capacity

- Having a greater capacity for endurance exercise will result in a better time in the 1.5 mile run.



Other Cardiovascular Training Benefits...



- Helps alleviate stress
- Increased HDL Cholesterol levels
- Decreased resting blood pressure
- Decreased insulin levels
- Decreased triglyceride levels
- Decreased percent body fat
- Decreased risk of developing Type 2 diabetes
- Decreased risk of developing hypertension
- Decreased risk of some cancers
- Increase bone density
- Improved PFA results

Cardiovascular Program Guidelines

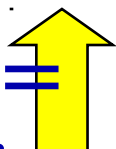
Cardiovascular Exercise Guidelines			
Individual Fitness Level	Low Fitness Level	Average Fitness Level	High Fitness Level
Frequency (Days per Week)	3-5	3-5	4-6
Intensity (% HR Reserve)	60-70	60-80	70-85
Time/ Duration (Minutes at THR)	10-30	20-45	30-60
Type	Walking, Running, Cycling, Cross-Trainer, Step Machine, Swimming, Group Exercise Classes		

Note: You will use primarily the leg muscles and sometimes the back, chest, and shoulders. The larger muscles require more oxygen during exercise. This requires more blood flow and increases the workload on

Strength Training, What are the Benefits?

Increased Resting Metabolism

- Muscle requires 35 calories per pound per day to maintain, while fat requires 2 calories per pound per day. Accounts for 75% of total calories burned each day.

 Muscle \equiv  Resting
Metabolism

Note: The average adult increases resting metabolic rate 7% by adding 3 pounds of muscle

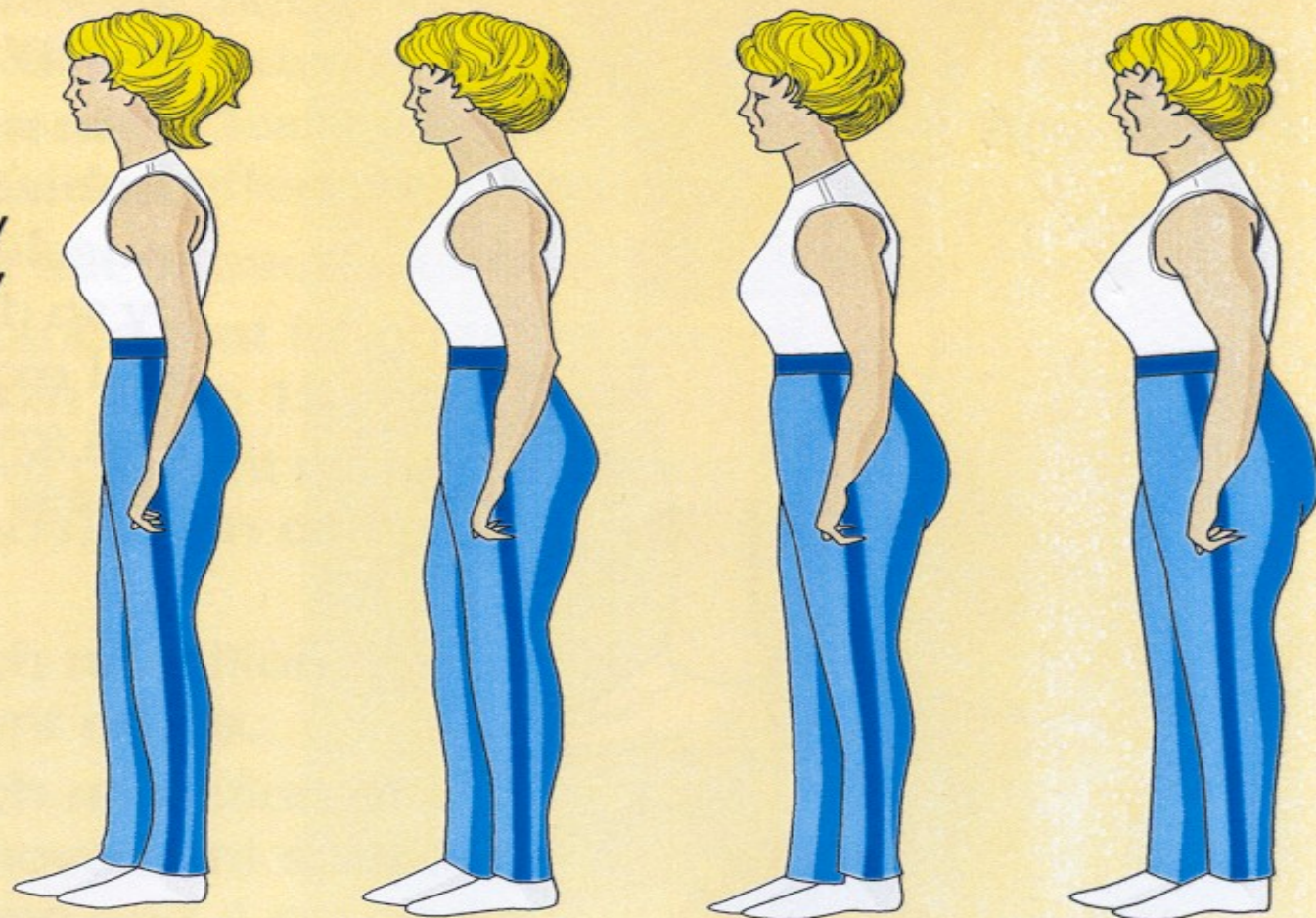
Strength Training: Benefits Continued



Maintain / Gain Muscle Mass

- From about age 20, the average American loses about 5-7 pounds of muscle every 10 years.
- The only way to prevent muscle loss or increase muscle mass is through some form of resistance training.

Figure 1. Body weight and body composition changes during adult life.

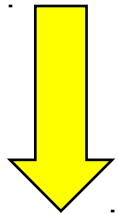


Age:	20	30	40	50
Bodyweight (lbs.)	126	136	146	156
Muscle (lbs.)	45	40	35	30
Fat (lbs.)	29	44	59	74
Percent Fat (%)	23	32	40	47

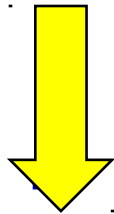
Adding to the Problem

Diet and Muscle Loss

- A low caloric diet will place your body in a state of calorie deprivation and cause weight loss (Yea!!!)
- Unfortunately 25% of the weight lost comes from reduced muscle



Muscle



Resting Metabolism

Note: Muscle mass can only be replaced by performing strength training

Relationship Between Muscle and Metabolism

	Body Weight*	Percent Fat	Fat Weight*	Lean Weight*	Estimated Muscle Weight*	Resting Metabolism (Calories)
Tracy	100	30	30	70	35	850
Tiffany	100	20	20	80	40	1075
Difference	----	10	10	10	5	225

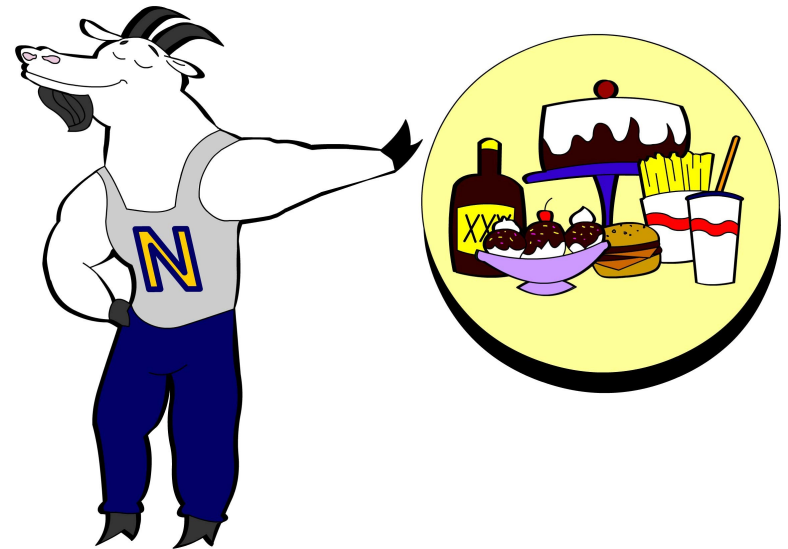
Data from BioAnalogics Diagnostic Medical Health Systems, Beaverton, Oregon

*In Pounds

Strength Training: Benefits Continued

Reduce Body Fat

As muscle mass increases, resting metabolic rate increases. This will cause a reduction in body fat assuming other factors (nutrition, etc.) remain constant.



Note: The average adult loses 4 pounds of fat after 3 months of strength exercise.

Changes in body composition following eight weeks of strength and endurance exercise

Training Group	Lean Weight **	Fat Weight**	Body Composition Improvement
Younger Adults	+3.0 Lbs	-8.5 Lbs	11.5 Lbs
Seniors	+2.5 Lbs	-4.0 Lbs	6.5 Lbs

*Significant Change ($p < 0.05$)

**Change in Pounds

Strength Training: Benefits Continued

Increase PFA Scoring

- By increasing your maximum strength in your triceps, chest, hip flexors, and abdominals you will see an increase in the maximal number of repetitions you can accomplish during a strength endurance test (curl-ups and push-ups)



Other Strength Training Benefits



- Increased Bone Mineral Density
- Improved Cholesterol Levels in the Blood
- Increased Gastrointestinal Transit Speed
- Reduced Resting Blood Pressure
- Reduced Low Back Pain
- Reduced Arthritic Pain
- Increased Physical and Mental Well-Being
- Improved Glucose Metabolism
- Improved PFA Results

Strength Training Guidelines



- Days - 2 to 3 days per week
- Time - 20 to 30 minutes per workout
- Machines - 10 selectorized machines
- Sets - 1 set to muscle failure per machine
- Reps - 8 to 12 repetitions per set

Note: By performing one set of 8-12 repetitions per exercise for each muscle group you will see similar benefits as multiple set routines.

Strength Training Guidelines

Strength Training Guidelines (core workout)

Machine	Muscles Worked	#of Sets/Reps	Repetition Speed	Rest
Leg Press	Legs (Quadriceps, Hamstrings, Gluteus)	1 set of 8-12 repetitions for each exercise	2 Seconds on Positive 4 Seconds on Negative	30 seconds between each set and remember to stretch the muscle you just worked
Leg Extension	Quadriceps			
Leg Curl	Hamstrings			
Chest Press	Chest (Pectorals), Triceps			
Lat Pull-Down or Row	Back (Lats and Rhomboids), Biceps			
Shoulder Press	Shoulders, Triceps			
Biceps Curl	Biceps			
Triceps Extension	Triceps			
Abdominal Flexion	Rectus Abdominus (Abs)			
Low Back Extension	Erector Spinae (Low Back)			

Flexibility Training, What are the Benefits?

Prevents Injuries

- A flexible muscle is more likely to stretch and give when put into a strained position. This will reduce the chance of muscle pulls and tears.



Flexibility: Benefits Continued

Prevents muscle imbalances and postural deviations

Flexibility in the lower back and hamstring area is very important. Lack of flexibility in these areas is associated with the development of chronic lower back pain and can greatly reduce your score on the sit and reach test.



Flexibility: Benefits Continued

Important for maximizing performance

- Flexible muscles and joints are less likely to be injured when strained during exercise or activity. Performing stretching exercises between sets will increase the results of your strength training.



Other Flexibility Benefits

- ▢ Reduces muscular tension
- ▢ Assists in the ease and coordination of movement
- ▢ Eases transition into high intensity activities
- ▢ Improve Sit and Reach score
- ▢ Improves circulation
- ▢ Relaxes the body
- ▢ Prime reliever of



Flexibility Training Guidelines

- **Days:** at least three times a week.
- **Warm-up:** the muscles should be warm prior to stretching, a few minutes of light exercise or even a warm shower will work.
- **Intensity:** stretch each muscle until tension is mild, then pause.
- **Time:** hold each stretch for 15 to 30 seconds.
- **Reps:** perform each stretch 3 to 5 times.
- **Performed:** do light stretching to warm-up prior to each exercise session; otherwise, stretching can be preformed at any time.



Flexibility Program

Flexibility Training Guidelines

Stretch	Muscle Group(s)	#of Sets / Reps	Hold Stretch For	Rest
Neck Stretch	Neck Muscles	1 Set of 3-5 Reps	15-30 Seconds	No Rest Between Stretches
Tricep Stretch	Triceps			
Upper Back Stretch	Rhomboids Teres Major			
Chest and Bicep Stretch	Pectorials and Biceps			
Butterfly Stretch	Groin			
Calf Stretch	Gastrocs and Soleus			
Hamstring Stretch	Hamstrings			
Lower Back Stretch	Erector Spinae			
Quadriceps Stretch	Quadriceps			
Back Extension Stretch	Abdominals			

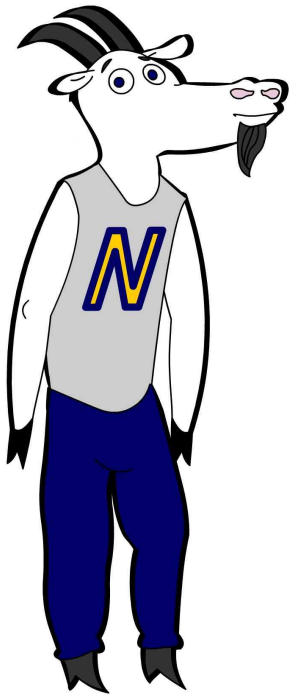
Nutrition, Why is it important?



- Understanding nutrition and following good nutritional guidelines is a very important part of overall fitness.
- Eating the right types and appropriate amounts of food will ensure your body has the fuel and nutrients needed for an active lifestyle.
- Improve body composition results for PFA.

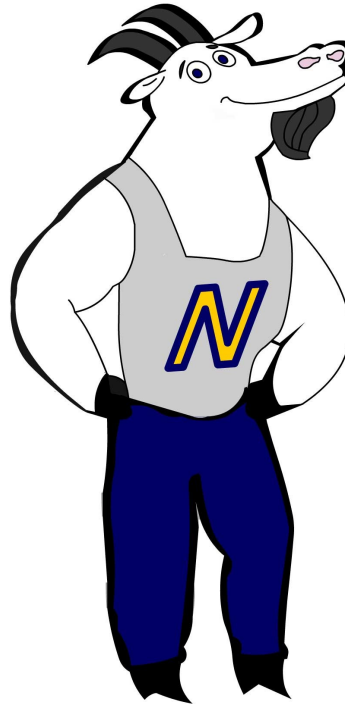
Rule Number One.

Calories Burned vs Calories Consumed



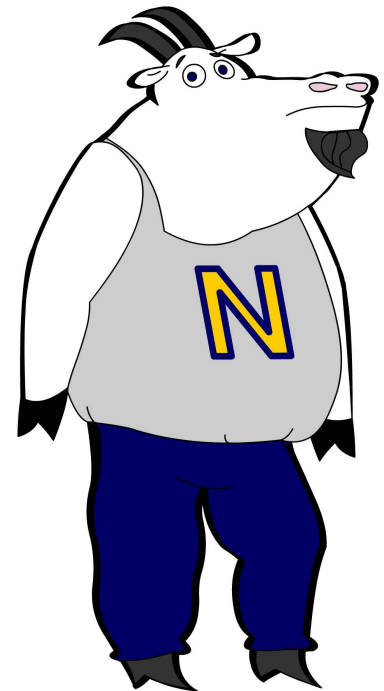
Intake 2500
Calories

Output 3000
Calories



Intake 3000
Calories

Output 3000
Calories



Intake 3500
Calories

Output 3000
Calories

Rule Number One:(Continued)

How to Accomplish



□ Burn more calories

- Cardio Training
- Strength Training
 - | increase muscle
- Increased Activity
 - | Walk
 - Play

■ Consume less calories

- Decrease/avoid sugars
- Portion control
- Drink water and avoid high calorie drinks
- Eat vegetables
- Eat slowly
- Minimize snacking and late night eating
- Cook more and eat out less

Get educated about nutrition!

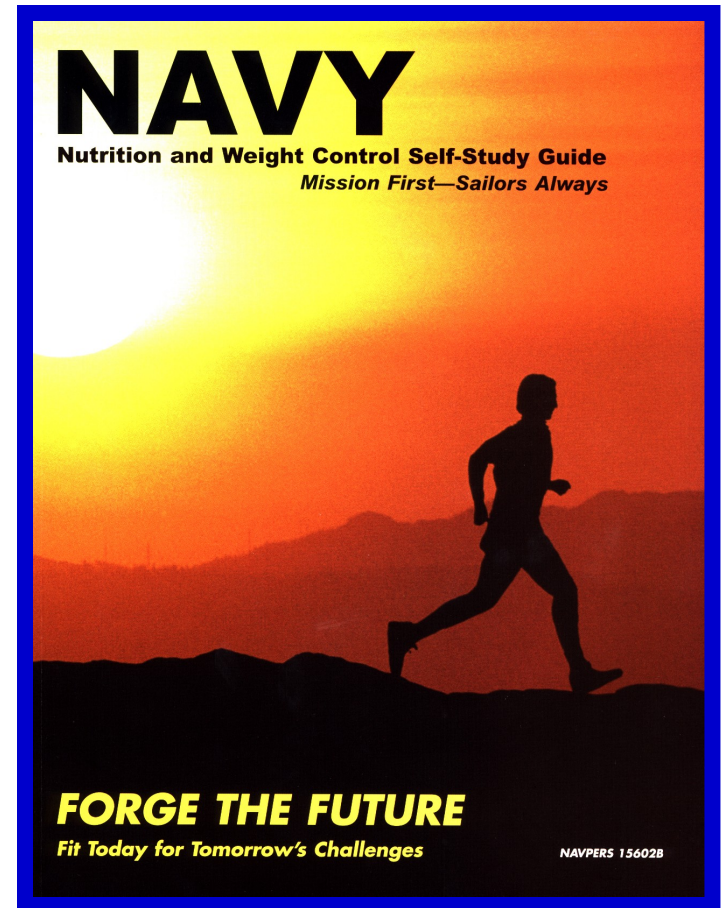


Unlike cardio and strength training, nutrition is not an optional activity. Eating is a part of our daily lives, so take the time to learn how to do it properly.

- Learn to read food labels.
- Learn about carbohydrates (complex and simple), proteins, and fats.
- Learn the difference between saturated and unsaturated fats.
- Understand why vitamins are necessary and determine if you need them in your diet.

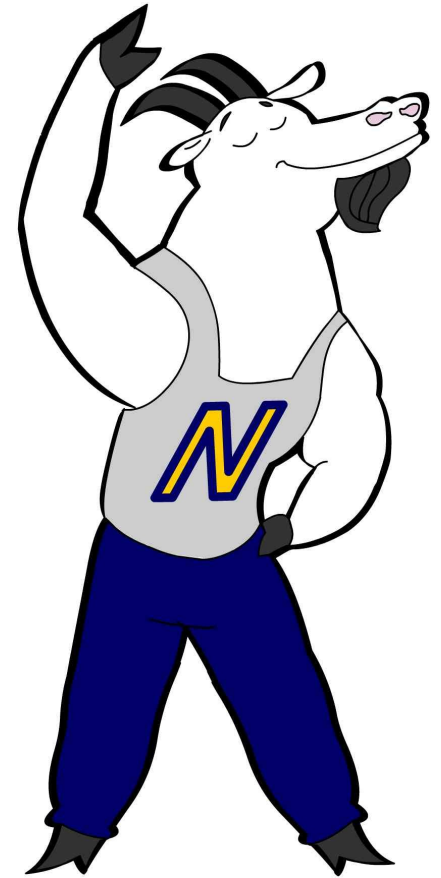
Nutritional Information

■ We highly encourage you to use the Navy Nutrition Self-Study Guide to improve your knowledge of nutrition.



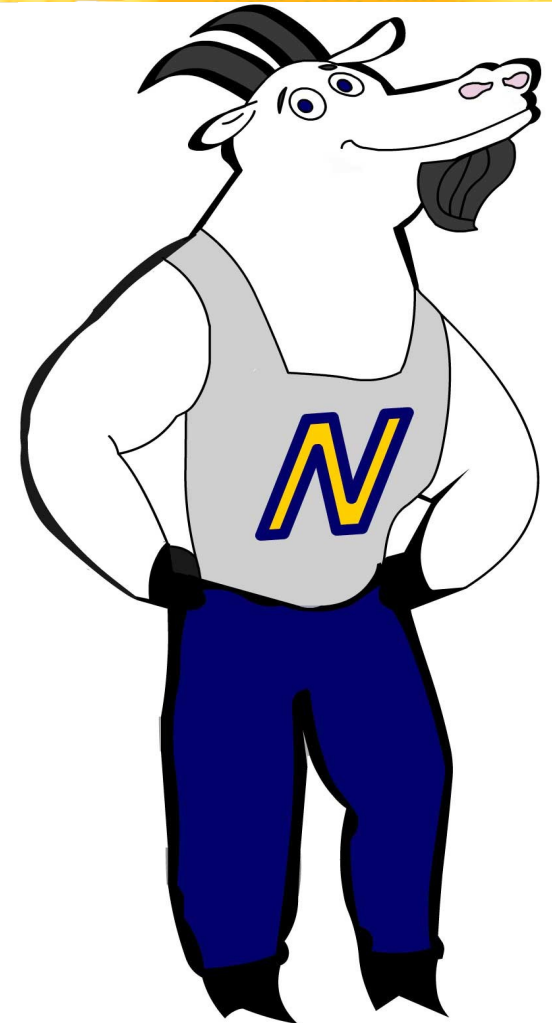
How is “Total Fitness” achieved in an everyday lifestyle?

- **Don't try to do it all at once, it is okay to break up cardio, strength, and flexibility.**
- **If you miss a workout, don't wait until the next “scheduled” time, find time as soon as possible.**
- **Try different activities and vary your exercise intensity to add variety to your workout.**



What is the next step?

- Visit you local MWR Fitness Facility to find out what programs and services are offered.
- Start educating yourself in the areas of strength, cardio, flexibility and nutrition.
- Getting active is the first step!



Thank You and Good Luck!

